

# Position Sensor DK

Type 2122A...

## Digital Gauge for Displacement and Position Determination

The displacement gauges Type 2122A... are available with measuring ranges of 10, 25, 50 and 100 mm and supply a digital incremental output signal with high resolution.

- Magnetic technology
- Spring loaded measuring axis
- Protection class IP64 of the sensor head
- High travel speed
- High resolution 5 µm
- Direct connection to TTL quadrature counter



### Description

The displacement gauges have a dustproof, splashwater proof and oil proof stainless steel housing. Inside of the sensor housing with robust guiding of the probe the movement of the probe is converted into digital pulses by magnetic technology. An interpolation circuit after 2 m of the sensor cable converts this signal to A/B/Z-TTL square pulses and allows a supply voltage of 5 volts.

### Applications

The displacement gauges may be directly connected to the force-displacement evaluation units of the DMF-P series Type 4733A..., Type 4734A... or Type 4731A... incremental X-input.

- Electronic position measuring of joining processes
- Relative movement measuring, part referenced
- Measuring of bearing slackness

### Technical Data

Model		DK 10	DK 25	DK 50	DK 100
<b>Elektrical Data</b>					
Measuring range	mm	10	25	50	100
Output signals		A/B/Z phase voltage-differential line driver output (EIA 422)			
Resolution	µm	5 (evaluation with quadrature counter – e.g. Type 4733A...)			
Accuracy (at 20° C)	µm	5			
Measuring force	N	<4,9	<4,9	<6,2	<9,3
Reference point (Track Z)		One location at 1 mm position of spindle movement			
Mass (approx.)	g	230	300	360	630
Maximum response speed	mm/s	4 100			
Vibration resistance (10 ... 2 000 Hz)	m/s <sup>2</sup>	150			
<b>Environmental Data</b>					
Operating temperature	°C	0 ... 50			
Storage temperature	°C	-20 ... 60			
Power supply voltage	VDC	+5 (±5 %)			
Power consumption	W	<1			
Protection class (sensor housing)	IP	64			
Feeler		Carbide ball tip (Mount screw M2.5)			
Life time		Minimum 5 million cycles without shock			
Diameter of stem	mm	22 <sup>(+0/-0,013)</sup>			

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**Dimensions**

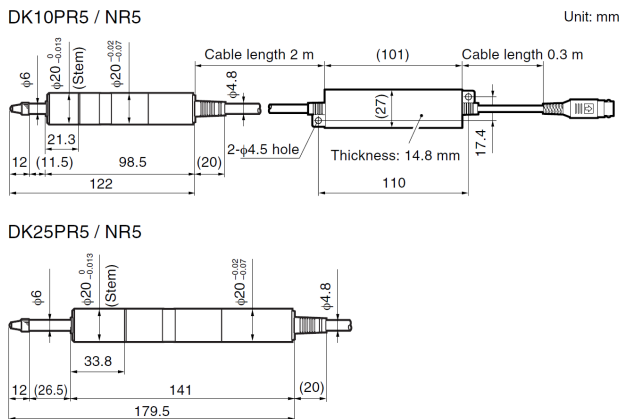


Fig. 1: Dimensions DK10 and DK25

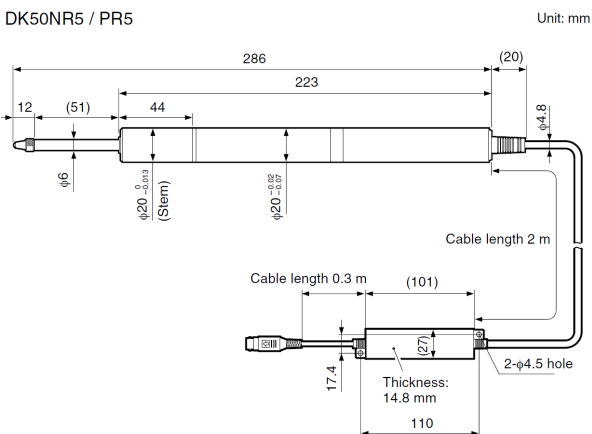


Fig. 2: Dimensions DK50

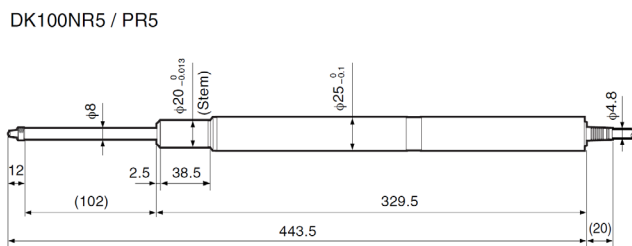
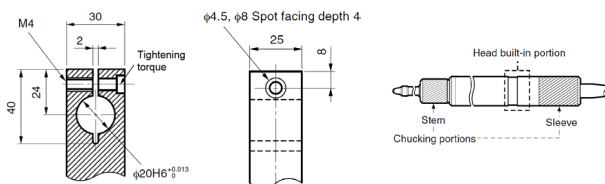


Fig. 3: Dimensions DK100



Note: Tightening torque of clamping screw is approx. 4 N·m

**Schematic**

M16 round connector, 8 pin  
Model Binder, Serie 581

	PIN	Signal
	1	Impulse +1 A
	2	Impulse -1 A
	3	Impulse +2 B
	4	Impulse -2 B
	5	Power supply +5 V
	6	Power supply 0 V
	7	Shield
8	Reference point Z	

**Assembly**

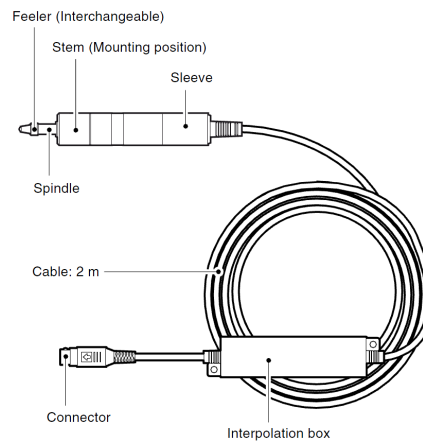


Fig. 4: Names of parts

**Included Accessories**

- None

**Accessories**

- Extension cable for 8 pin plug-in connection, cable chain approved

**Type**

KSM236910SP

**Ordering Key**

**Position Sensor DK**

10 mm	<b>10</b>
25 mm	<b>25</b>
50 mm	<b>50</b>
100 mm	<b>100</b>

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